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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,270	11/08/2001	Gregory S. Hageman	020618-000120US	3566
20350	7590	11/21/2006	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP			SEHARASEYON, JEGATHEESAN	
TWO EMBARCADERO CENTER				
EIGHTH FLOOR			ART UNIT	PAPER NUMBER
SAN FRANCISCO, CA 94111-3834				1647

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/007,270	HAGEMAN ET AL.	
	Examiner Jegatheesan Seharaseyon, Ph.D	Art Unit 1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5,10,11,21-25 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 2,3,27 and 28 is/are allowed.
- 6) Claim(s) 1,4,5,10,11,21-25 and 29-31 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input checked="" type="checkbox"/> Other: <u>Appendix A-C</u> .

DETAILED ACTION

1. The Office Action mailed 8/23/06 has been vacated. A corrected Office Action follows. Appendix A-C are included. The reply period for this Office Action will start from the mailing date of this communication.
2. This office action is in response to the amendment and remarks filed on 6/7/06. Claims 29-31 have been amended. Claim 26 is canceled. Therefore, claims 1-5, 10-11, 21-25 and 27-31 are currently pending and are examined.
3. The text of those sections of Title 35, U. S. Code not included in this action can be found in a prior Office action.
4. Any objection or rejection of record, which is not expressly repeated in this action, has been overcome by Applicant's response and withdrawn.
5. The Office is withdrawing the allowance of claims 5, 10 and 11 due to the new grounds of rejections applied below.

Claim Rejections - 35 USC § 112, first paragraph (maintained)

6. The rejection of claims 4-5, 10-11 and 21-22 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for nucleotides encoding a polypeptide of SEQ ID NO: 2, does not reasonably provide enablement for the various fragments complement encoding a polypeptide comprising at least 190 contiguous amino acids residues of SEQ ID NO: 2 is maintained for reasons set forth in the Office Action dated 1/31/06 (pages 6-11) and below. Wand's factors were discussed in the previous Office Action dated 1/13/06. Applicant in the response filed 6/7/06 has not

indicated how complement will encode the polypeptide of SEQ ID NO: 2. As indicated previously there is a single polynucleotide disclosed with reference to IPM150 isoform A, SEQ ID NO: 2. There is no enabling disclosure to support a complementary sequence to encode a polypeptide of SEQ ID NO: 2. Despite knowledge in the art for producing a polypeptide the specification fails to provide any guidance regarding its complementary nucleotide sequences to encode polypeptide of SEQ ID NO: 2. Thus, undue amount of experimentation would be required to generate the polypeptide of SEQ ID NO: 2 using the complementary sequences. Claims 5, 10, 11 and 21-22 are rejected insofar as they depend from claim 4.

7. The rejection of claims 4-5, 10-11 and 21-22 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention is maintained for reasons set forth in the Office Action dated 1/31/06 (pages 3-6) and below. Applicant in the response filed 6/7/06 has not indicated how complement will encode the polypeptide of SEQ ID NO: 2. The specification discloses the nucleotides of SEQ ID NO: 1 and nucleotides encoding SEQ ID NO: 2 (Page 10, paragraph 47). This meets the written description provisions of 35 USC 112, first paragraph. However, the specification does not disclose a complementary sequence that encodes a polypeptide comprising at least 190 amino acid residues of SEQ ID NO: 2 contemplated by the Applicant. The claims as written, however, encompass sequences which were not originally contemplated and fail to meet the written

description provision of 35 USC 112, first paragraph because the written description is not commensurate in scope with the recitation of claim 4. The specification does not provide written description to support the genus encompassed by the instant claim. As a result, it does not appear that the inventors were in possession of complementary polynucleotide sequence set forth in claim 4. Therefore, only isolated polynucleotide encoding SEQ ID NO: 2 but not the full breadth of the claim meets the written description provision of 35 USC 112, first paragraph. Claims 5, 10, 11 and 21-22 are rejected insofar as they depend from claim 4.

Claim Rejections - 35 USC § 112(New)

8. Claims 1, and 23-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8a. Claim 1 is rejected as being indefinite because the claim recites "wherein said nucleic acid segment is 100 to 3330 nucleotides in length and has sequence identity to SEQ ID NO: 1". The Office is assuming that the nucleotide fragment contemplated could have any percentage identity to SEQ ID NO: 1 and thus the claim is considered indefinite. Applicant can obviate the rejection by amending the claim to recite "wherein said nucleic acid segment is 100 to 3330 contiguous nucleotides of SEQ ID NO: 1". Claims 23-25 are rejected insofar as they depend from claim 1.

Claim Rejections - 35 USC § 102(New)

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9a. Claims 1, and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Macke et al. (1996, Accession No.W26960).

Macke et al. (1996, Accession No.W26960) discloses a 561bp cDNA fragment (EST) from human retinal library. Claim 1 is drawn to polynucleotide comprising a nucleic acid segment or its complement that is 100 to 3330 nucleotides long that has identity to SEQ ID NO: 1. It is noted that the claim does not indicate any specific percent identity. In addition, claims 29-31 are drawn to polynucleotide primers or probes comprising a nucleotide sequence that is identical to or complementary to SEQ ID NO: 1 and between 12 and 100 contiguous nucleotides in length. As can be seen in Appendix A, the EST fragment disclosed by Macke et al. contains at least 300bp that are identical to SEQ ID NO: 1. Therefore, claims 1 and 29-31 are anticipated by Macke et al. (1996, Accession No.W26960).

9b. Claims 1, 23-25 and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Gelfand et al. (U. S. Patent No. 5, 466, 591).

Gelfand et al. discloses SEQ ID NO: 11 which has a 20bp that is identical to 20 nucleotides of SEQ ID NO: 1 of the instant invention (see Appendix B). Claim 1 is drawn to polynucleotide comprising a nucleic acid segment or its complement that is 100 to 3330 nucleotides long that has identity to SEQ ID NO: 1. It is noted that the claim does not indicate any specific percent identity. Further, claims 23 and 24, are drawn to nucleic acid segment that is at least 500 and 1000 nucleotides long and that has identity to SEQ IDNO: 1. In addition, claims 29-31 are drawn to polynucleotide primers or probes comprising a nucleotide sequence that is identical to or complementary to SEQ ID NO: 1 and is between 12 and 100 contiguous nucleotides. Therefore, claims 1, 23-25 and 29-31 are anticipated by Gelfand et al. (U. S. Patent No. 5, 466, 591).

9c. Claims 1, 23, 24 and 29-31 are rejected under 35 U.S.C. 102(a) as being anticipated by Felbor et al. (1998, Reference C10 on PTO1449 Of 2/05/2004, also Accession No. AF017776.1).

Felbor et al. (1998, Accession No.AF017776.1) discloses a 1235 bp cDNA fragment of human interphotoreceptor matrix gene (IPM150), exon 17. There is identity to about 700 nucleotides and appears not to be non-coding. . Claim 1 is drawn to polynucleotide comprising a nucleic acid segment or its complement that is 100 to 3330 nucleotides and has identity to SEQ ID NO: 1. Further, claims 23 and 24, are drawn to nucleic acid segment that is at least 500 and 1000 nucleotides long and that has identity to SEQ IDNO: 1. In addition, claims 29-31 are drawn to polynucleotide primers or probes comprising a nucleotide sequence that is identical to or complementary to SEQ

ID NO: 1 and is between 12 and 100 contiguous nucleotides. As can been seen in Appendix C1-2 the cDNA fragment disclosed by Felbhor et al. contains at least 1235bp and has identity to SEQ ID NO: 1. Therefore, claims 1, 23, 24 and 29-31 are anticipated Felbor et al. (1998, Reference C10 on PTO1449 0f 2/05/2004, also Accession No.AF017776.1).

Conclusion

10. Claims 2, 3, 27 and 28 are allowable.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jegatheesan Seharaseyon, Ph.D whose telephone number is 571-272-0892. The examiner can normally be reached on M-F: 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on 571-272-0961. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Art Unit: 1647

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS
Art Unit 1647,
October 10, 2006

CHRISTINE J. SAoud
PRIMARY EXAMINER®

Christine J. Saoud

Applicatioνe Chap. 1

FEATURES	source
RESULT 14	
EX007116	
LOCUS BX097116	472 bp mRNA linear. EST 04-FEB-2003
DEFINITION BX097116 Soates retina Homo sapiens cDNA clone.	
VERSION BX097116	IMAGP98N11359; IMAGP190666, mRNA sequence.
REVISION BX097116.1	01:27843098
KEYWORDS EST.	
SOURCE Homo sapiens (human)	
ORGANISM Homo sapiens	
REFERENCE (bases 1 to 172)	Borkyata, Matsuoka, Chordata, Vertebrata, Eukaryota, Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
AUTHORS Bortkay, L., Heil, O., Henning, S., Neubert, P., Partsch, B., Peters, M., Raddele, U., Schmid, D., and Korn, B.	
TITLE Unpublished (2003)	
JOURNAL Contact: Ina Rolfe	RZPD Deutsche Ressourcenzentrum fuer Genomforschung GmbH
COMMENT Im Neuenheimer Feld 580, D-69120 Heidelberg, Germany	
REVDID 1	RZPD; IMAGP98N11359.
REFID 1	RZPD; 1-M-A-G-S. CDNA Clone Collection/ Human UniGeneset - RZPD (RZPD No.372) http://www.rzpd.de/CloneDatabase/cgi-bin/showPub?1-M-A-G-S/responses?11359
REVDID 2	RZPD Deutsche Ressourcenzentrum fuer Genomforschung GmbH Buchbarenweg 6, D-14059 Berlin, Germany
REFID 2	Te: +49 30 32659 103 Fax: +49 30 32659 111 www.rzpd.de
REVDID 3	This clone is available royalty-free from RZPD, contact RZPD (clones@rzpd.de) for further information. Seq primer: M13R. Primer sequence: TTTCACGCGAACGCTATGAC.
Location/Qualifiers	
1.	/organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" /clone_id="IMAGP98N11359", /MAGE:190666.
2.	/tissue_type="retina" /dev_STAGE="55 year old" /lab_hab="DNA (ampicillin resistant)" /clone_id="Soates retina N26HR" /hab_Taxon: Vector pETR (Pharmacia) with a modified polylinker, site 1: Not I, site 2: Eco RI, 1st strand cDNA was primed with a Not I - oligo(dT) primer [5'-TTTACCACTCTGGTGTGAGCGCGCTTTTTTTT 3'], double-stranded cDNA was size selected, ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not 1 and Eco RI sites of a modified pRPT3 vector (Pharmacia). The retinas were obtained from a 55 year old Caucasian and total cellular poly(A+) RNA was extracted 6 hrs after their removal. The retina RNA was kindly provided by Rosemarie R. Moineau M.D. Ph.D. from the

Applications

(/db_xref="taxon:9606"
/sex="mixed males and females"-
/tissue_type="retina"
/dev_stage="adult"
/lab_host="B. coli strain K802"
/clone_1.lib="human retina cDNA randomly primed library"
/clone_1.org="Organ: eye; Vector: lambda gt10; Site: 1; Scori;
Site 2; Scori"; The library used for sequencing was a
library derived from a human retina cDNA library.
Isolates from Section C were randomly primed, PCR amplified,
cloned into lambda gt10. Individual plaques were arrayed and cloned
products were used for sequencing.

Search completed, March 1, 2004, 20:29:00
Job time : 0160 sec9

Applications 207

SOFTWARE: PaseBQ for Windows Version 4.0
 SBO ID NO: 161496
 LENGTH: 601
 TYPE: DNA
 ORGANISM: Human
 US-09-949-016-161496

Query	Db	Score	Length	Pred.	No.	Mismatches	Indels	Gaps
36 AATATAATTATTTTCAC 55	138 AATATTAATTATTTTCAC 157	0.6%	201	DB 3;	Length 601;			
Matches 20; Conservative 0;								
Qy	Db							

RESULT 9
 US-09-617-785-5
 Sequence 5, Application US/08617785B

GENERAL INFORMATION:	
Patent No.	6228610
APPLICANT:	Flor, Peter J.
APPLICANT:	Kuhn, Rainer
APPLICANT:	Lindaur, Kristen
APPLICANT:	Puttner, Irene
APPLICANT:	Knopfel, Thomas
TITLE OF INVENTION:	Human Metabotropic Glutamate Receptor Subtypes (HMR4, HMR7) and Related DNA Compounds
FILED REFERENCES:	4-1973/A/PCT
CURRENT APPLICATION NUMBER:	US/08/617.785B
CURRENT FILING DATE:	1996-03-19
EARLIER APPLICATION NUMBER:	PCT/EP94/02991
EARLIER FILING DATE:	1994-09-07
EARLIER APPLICATION NUMBER:	EPO 9416553.7
EARLIER FILING DATE:	1994-08-19
EARLIER APPLICATION NUMBER:	EPO 93810663.0
EARLIER FILING DATE:	1993-09-20
NUMBER OF SBO ID NOs:	26
SBO ID NO:	5
LENGTH:	1199
TYPE:	DNA
ORGANISM:	Homo sapiens
FEATURE:	
NAME/KEY:	CDS
LOCATION:	(1)...(270)
FEATURE:	
NAME/KEY:	unsure
LOCATION:	(920)...(1090)
OTHER INFORMATION:	Nucleotides designated as n could be a or g or c
OTHER INFORMATION:	or t/u
US-09-617-785-5	

RESULT 10
 US-09-817-464-5
 Sequence 5, Application US/09817464

GENERAL INFORMATION:				
Patent No.	6515107			
APPLICANT:	Flor, Peter J.			
APPLICANT:	Kuhn, Rainer			
APPLICANT:	Lindaur, Kristen			
APPLICANT:	Puttner, Irene			
APPLICANT:	Knopfel, Thomas			
TITLE OF INVENTION:	Human Metabotropic Glutamate Receptor Subtypes (HMR4, HMR7)			
Query Match	0.6%	Score 20;	DB 3;	Length 1399;
Best Local Similarity	100.0%	Pred.	No. 30;	
Matches 20; Conservative 0;				
Qy	Db			

RESULT 11
 US-09-817-464-5
 Sequence 5, Application US/09817464

GENERAL INFORMATION:				
Patent No.	6515107			
APPLICANT:	Flor, Peter J.			
APPLICANT:	Kuhn, Rainer			
APPLICANT:	Lindaur, Kristen			
APPLICANT:	Puttner, Irene			
APPLICANT:	Knopfel, Thomas			
TITLE OF INVENTION:	Human Metabotropic Glutamate Receptor Subtypes (HMR4, HMR7)			
Query Match	0.6%	Score 20;	DB 3;	Length 1399;
Best Local Similarity	100.0%	Pred.	No. 30;	
Matches 20; Conservative 0;				
Qy	Db			

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TITLE OF INVENTION: HMR6, HMR7) and Related DNA Compounds
FILE REFERENCE: 4-19679/A/PCT
CURRENT APPLICATION NUMBER: US/09/817,464
CURRENT FILING DATE: 2001-03-26
EARLIER APPLICATION NUMBER: US/08/617,785
EARLIER FILING DATE: 1996-03-19
EARLIER APPLICATION NUMBER: EPO 9416553-7
EARLIER FILING DATE: 1994-08-19
EARLIER APPLICATION NUMBER: EPO 93810663-0
EARLIER FILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1399
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(270)
FEATURE:
NAME/KEY: unsure
LOCATION: (920)..(1090)
OTHER INFORMATION: Nucleotides designated as n could be a
OTHER INFORMATION: or t/u
US-09-817-464-5

Query Match Similarity      0.61% Score 20/ DB 3; Length 11
Best Local Similarity      100.0% Pred. No. 30; Length 11
Matches   20; Conservative 0; Mismatches 0; Indels 0

Qy          1201 CATGGACCATGGAGGAGGA 1220
Db          283 CATTGACCATGGAGGAGGA 302

RESULT 11
US-07-917-434-11/c
Sequence 11, Application US/07977434
Patent No. 5466591
GENERAL INFORMATION:
APPLICANT: Gelfand, David H.
APPLICANT: Abramson, Richard D.
TITLE OF INVENTION: 5' TO 3' EXONUCLEASE MUTATIONS OF
TITLE OF INVENTION: THERMOSTABLE DNA POLYMERASES
NUMBER OF SEQ ID NOS: 38
CORRESPONDENCE ADDRESS:
ADDRESS: Hoffmann-La Roche Inc.
STREET: 1340 Kingsland Street
CITY: Nutley
STATE: New Jersey
ZIP: 07110-1199
COMPUTER READABLE FORM:
MEDIA TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: 7
SOFTWARE: ModPerfect 2.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/977,434
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 590,490
FILING DATE: 28-6-SP-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 590,466
FILING DATE: 28-6-SP-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 590,213
FILING DATE: 28-6-SP-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 523,394
FILING DATE: 15-MAY-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 523,394
FILING DATE: 15-MAY-1990
PRIOR APPLICATION DATA:

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Applicant's copy

Appendix B2

APPLICATION NUMBER: US 143,441
 FILING DATE: 12-JAN-1988
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 063,509
 FILING DATE: 17-JUN-1987
 PRIOR APPLICATION NUMBER:
 APPLICATION NUMBER: US 899,241
 FILING DATE: 22-AUG-1986
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 746,121
 FILING DATE: 15-AUG-1991
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: WO PCT/US90/07641
 FILING DATE: 21-DEC-1990
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 585,471
 FILING DATE: 20-SEP-1990
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 455,611
 FILING DATE: 22-DEC-1989
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 609,157
 FILING DATE: 02-NOV-1990
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 557,517
 FILING DATE: 24-JUL-1990
 ATTORNEY/AGENT INFORMATION:
 NAME: Lauren Clegg
 REGISTRATION NUMBER: 31,822
 REFERENCE/DOCKET NUMBER: Case No. 5466591. 8753
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (510) 814-2972
 INFORMATION FOR SEQ ID NO: 11:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 2679 base pairs
 TYPE: nucleic acid
 STRANDNESS: Single
 TOPOLOGY: Linear
 MOLECULE TYPE: DNA (genomic)
 HYPOTHETICAL: NO
 ANTI-SENSE: NO
 ORIGINAL SOURCE:
 ORGANISM: Thermosiphoph africanus
 FEATURE:
 NAME/KEY: CDS
 LOCATION: 1..2676
 US-07-977-434-11

RESULT 12
 US-08-458-819-11/c
 Sequence 11, Application US/08458819
 Patent No. 5795762
 GENERAL INFORMATION:
 APPLICANT: Gelfand, David H.
 APPLICANT: Abramson, Richard D.
 TITLE OF INVENTION: 5' TO 3' EXONUCLEASE MUTATIONS OF
 TITLE OF INVENTION: THERMOSTABLE DNA POLYMERASES
 NUMBER OF SEQUENCES: 38
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Hoffmann-La Roche Inc.
 STREET: 310 Kingsland Street
 CITY: Nutley
 STATE: New Jersey
 ZIP: 07110-1199

Query Match 0.6%; Score 20; DB 2; Length 2679;
 Best Local Similarity 100.0%; Pred. No. 30;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy 3181 AATATCTTGTATTCTTCTTCTTCT 3200
 Db 550 AATATCTTGTATTCTTCTTCT 531

RESULT 12
 US-08-458-819-11/c
 Sequence 11, Application US/08458819
 Patent No. 5795762
 GENERAL INFORMATION:
 APPLICANT: Gelfand, David H.
 APPLICANT: Abramson, Richard D.
 TITLE OF INVENTION: 5' TO 3' EXONUCLEASE MUTATIONS OF
 TITLE OF INVENTION: THERMOSTABLE DNA POLYMERASES
 NUMBER OF SEQUENCES: 38
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Hoffmann-La Roche Inc.
 STREET: 310 Kingsland Street
 CITY: Nutley
 STATE: New Jersey
 ZIP: 07110-1199

Query Match 0.6%; Score 20; DB 2; Length 2679;

Ancient City

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Quality Match 24, 501 85